

Environmental Hero Helps Sanctuary

Fresh from his appearance as a symbol of the environment at the 2002 Salt Lake City Olympics, Jean-Michel Cousteau thrilled fifth-graders at Āliamanu Elementary School with a visit to their Honolulu classroom.

The famed ocean explorer commended the school children for winning the Sanctuary Slogan Contest. The prize words: See a Tail, Save a Whale. “It makes sense, it has alliteration, it’s easy to remember, it’s the right thing to do,” the children explained in their well-rehearsed presentation. Cousteau graciously answered the kids’ questions about whales, often drawing on his own eyewitness accounts from his own boyhood spent sailing around the world aboard the research vessel Calypso with his ocean pioneer father Jacques Cousteau.

Āliamanu fifth grade teacher Laura Fukumoto said Cousteau’s presence capped off a year of environmental education, which she calls “extremely important” for her students, many of whom are military dependents from nearby Naval housing. “They will be leaving Hawai‘i soon, but they will take with them lessons about caring for a beautiful environment and they will always remember meeting a true environmental hero,” said Fukumoto.

Jean-Michel Cousteau also stirred a wave of interest from teachers and others on Kaua‘i, where his appearance at the annual



Left: Jean-Michel Cousteau congratulates Āliamanu fifth-graders.

Family Ocean Fair included a presentation at the fair’s marine-themed educator’s workshop. Amid 1,500 fairgoers that streamed into the Kīlauea Point National Wildlife Refuge overlooking sanctuary waters, Cousteau promoted ocean stewardship by screening one of his original video productions. He also helped get the word out about the National Marine Sanctuary Foundation, a new non-profit organization created to support sanctuary education programs. Y



June 2002

RESEARCH RAISES HOPE FOR ENTANGLED WHALES



Can entanglement hurt the female humpback's breeding ability? Researchers are investigating.

Once again this winter, endangered humpback whales migrated from their coldwater breeding grounds off Alaska to the warm and shallow banks of the Hawaiian Islands. They came to breed, give birth and nurse their young. And though their total estimated number of around 5,000 in Hawaiian waters was impressive, there is mounting evidence that the species is facing a perilous ocean enemy—marine debris.

Researcher David Mattila, who served as Sanctuary Science and Rescue Coordinator in 2002, has been studying wounds that result when whales are entangled in the debris of cast off and lost fishing gear. His findings illustrate that a seemingly benign fishing line can become a plastic predator.

Says Mattila: “When entanglement occurs, the whale may initially continue to swim, towing the gear along. But if a plastic or rope fragment remains embedded in the whale, it can cause chronic infection and lead to death.” Mattila adds that the entangled animal can also become so distressed that it becomes unable to feed and eventually dies of starvation.

Under State and NOAA Fisheries permits (along with funding from the sanctuary and the Marine Mammal Commission), Mattila spent part of this winter gathering photographic evidence and tissue samples of scarred whales. In a previous study of North Atlantic right whales, Mattila found that about 25 percent of all surveyed animals exhibited at least minor wounds that appeared to be caused by derelict fishing gear. The good news, if it can be called that, is that the whales survived the troublesome encounters—not an unexpected outcome since males, particularly during breeding season, are resilient enough to survive the injury they inflict in vigorous bouts of competition for

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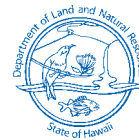
PUBLIC REVIEWS SANCTUARY PLAN

Humpback calves born when the sanctuary was designated five years ago are now adults. Will this be the “comeback generation” of the endangered humpback species? Under a newly revised management plan, the Hawaiian Islands Humpback Whale National Marine Sanctuary would continue to work at making this a reality. While no changes to the sanctuary’s original boundaries or regulations are being proposed, the revamped plan calls for implementing activities in five key program areas including research, education, resource protection, cultural enhancement and administration. For the first time, performance measures would be used to evaluate the activities as they relate to the sanctuary’s progress in supporting the recovery of humpbacks in the North Pacific.

Like the original plan that put Hawai‘i’s humpback sanctuary on the map in 1997, the updated version is intended to serve as a blueprint for the next five years of sanctuary operations. Sanctuary staff and members of the Sanctuary Advisory Council collaborated on drafting the new plan, which was released to the public on March 19.

The revised management plan was the focus of public meetings held by the sanctuary on each island during May. Comments elicited in roundtable discussions ranged from the pragmatic to the philosophical. Some who turned out at the meetings came to express specific requests: post more

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**HAWAIIAN ISLANDS HUMPBACK WHALE
NATIONAL MARINE SANCTUARY**
6700 Kalanianaʻole Hwy. #104
Honolulu, Hawai‘i 96825

PRESORTED
FIRST CLASS MAIL
POSTAGE & FEES
PAID
National Oceanic &
Atmospheric
Administration-
Commerce
PERMIT NO. G-19

GET HOOKED...

on solving the marine debris problem affecting humpbacks and all ocean creatures

CHECK OUT...

the recommendations of the International Marine Debris Conference. This call to action is now posted on the sanctuary website along with the complete conference proceedings.

COMING SOON...

a chance to share your own ideas on marine debris. Please visit: www.hihwnms.nos.noaa.gov



ABOUT THE SANCTUARY

The Hawaiian Islands Humpback Whale National Marine Sanctuary was established by Congress in 1992 to protect humpback whales and their habitat in Hawai‘i. To achieve this goal, the sanctuary conducts public education and scientific research in coordination with a variety of government and non-government organizations. As part of the National Marine Sanctuary System administered by the National Ocean Service of the National Oceanic and Atmospheric Administration (NOAA), the sanctuary is one of 13 areas designated as marine environments of national significance. NOAA and the State of Hawaii co-manage the sanctuary under a federal-state partnership.



RESEARCH... *Cont. from page 1*

a female’s attention. But entanglement may prove to have an impact more subtle and insidious than the wild creatures’ natural behavior. Fueling new concern are results from Mattila’s previous research which suggest females are not only more likely than males to be wounded by fishing gear, but they are also less likely to reproduce once they have become injured. This would mean that entanglement is harming the humpback’s chance for full recovery. In order to test his hypothesis, Mattila has devised a “whale trauma test” that involves comparing tissue samples of clean and scarred whales for the presence of a stress hormone. Admittedly, says Mattila, the wounded females may simply have a pre-disposition to entanglement as a result of an ailment that also hampers their fertility. He hopes the study will demonstrate if the correlation is purely incidental.

Twice this past season two reports of whales in distress turned out to involve entanglement. Mattila joined other whale experts summoned to the scene, but their rescue efforts were not successful, when the ensnared animals could not be located in a timely manner. Would-be whale rescuers always face tremendous risk, since, as Mattila points out, injuries make the colossal creatures unpredictable. Sedation is also a risky way to subdue marine mammals in trouble. Unlike their terrestrial counterparts, oxygen-breathing whales may sink beneath the water’s surface and quickly die.

Mattila has successfully disentangled Atlantic whales by using a method dubbed the “Massachussetts Sleigh Ride”—an ironic reference to the old whaling practice of hitching a boat on a harpooned whale until it bled to death. In the conservation variant, rescuers hitch their vessel to the gaggle of fishing gear that has trapped the whale; the whale tires of towing the increased load and settles down to enable humans to venture close with liberating line-cutters. While in Hawai’i, Mattila demonstrated techniques of the procedure for other whale experts. Mattila stresses that researching the problem of marine debris and its impacts on whales will, in the long-term, produce the much needed answers that will reduce the need for emergency rescues.

“It may sound like a cliché, but the more we know about humpbacks, the more we need to know in order to protect them,” he says. Y

PUBLIC REVIEWS... *Cont. from page 1*



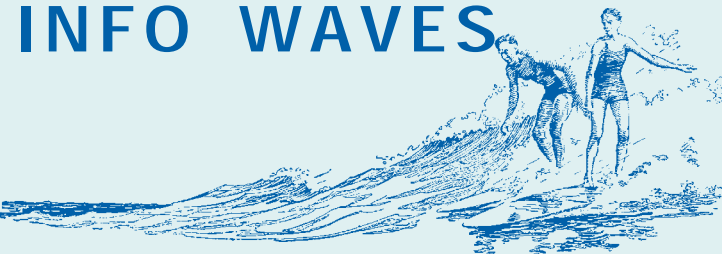
At Hilo public meeting, citizens help to chart sanctuary’s future. Management Plan Coordinator Anne Reisewitz (on right) records comments.

signs or produce more educational material; others came with ideas on how they believed whales and other marine life could be better protected. Frequently, the need to expand the sanctuary’s mission to include other species was suggested. A copy of the revised management plan and all comments, including written ones submitted before May 24, may be viewed on the sanctuary web site at www.hihwnms.nos.noaa.gov.

Citizen input on the revised management plan plays an important role. The National Marine Sanctuary Program will prioritize the strongest concerns and address them when it prepares a final version of the new plan. This will be sent in August for final approval to the National Oceanic and Atmospheric Administration and the State of Hawai’i—management partners of Hawaiian Islands Humpback Whale National Marine Sanctuary.

As one of 13 sites within the National Marine Sanctuary Program, Hawai’i’s sanctuary is required to have a management plan that demonstrates the ability to serve the public interest in protecting natural resources. The national program also requires sanctuaries to update plans periodically to ensure that new developments both in the ocean and in coastal communities are being addressed. Y

INFO WAVES



- Trustees of the Office of Hawaiian Affairs on March 20th voted to endorse the reauthorization of the sanctuary. The action followed two presentations where sanctuary staff described a commitment to perpetuating traditional Native Hawaiian cultural practices within sanctuary boundaries. Staff also told trustees about the sanctuary’s future plans aimed at enhancing public understanding of the Native Hawaiian approach to ocean stewardship.
- With the help of a \$5,000 grant from Maui County, native vegetation will be used to stabilize beach erosion affecting the picturesque site of sanctuary headquarters in Kīhei, Maui. The new shorefront fix includes the latest beachfront restoration technology and will help reduce the risk of flooding and other erosion-related problems, exacerbated by the coastal area’s high wind and wave action.
- Huge humpbacks made a big impression on Kaua’i’s smallest citizens at the 15th Annual Mahelona Hospital Petting Zoo. A throng of 850 pre-schoolers and kindergartners had fun making humpback whale buttons (imprinted with the sanctuary’s web site). Kaua’i Sanctuary Liaison Jean Souza, who organized the craft activity, reports that teachers present carted off sanctuary educator packets, full of games and ideas for engaging youngsters’ continued interest in marine mammals.

HAWAIIAN FISHPOND BECOMES A LIVING CLASSROOM



At sanctuary headquarters, Fishermen are drawn to waters surrounded by stones of ancient Hawaiian fishpond (seen in background).


The evenly tailored fit of the stones encircling the sanctuary’s beachfront headquarters in Kīhei is your best clue that this is not just nature’s handiwork but the remains of *Kō’ie’ie Loko I’a*, a fishpond in an important aquaculture system constructed several centuries ago by the Native Hawaiians who first inhabited these shores.

Since opening its doors at this site in 1995, the sanctuary has supported community groups in an effort to restore *Kō’ie’ie Loko I’a* to its former glory. Now a new project is helping to rebuild the

Ka Leo O Ke Koholā

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Please visit the sanctuary web site: www.hihwnms.nos.noaa.gov



fishpond’s cultural value. Under a three year federal grant, the American Pacific Foundation is using the site as a living classroom to demonstrate how Native Hawaiians balanced the use and protection of precious fish stocks .

Herb Lee, founder of the American Pacific Foundation, has developed a fishpond-based curriculum for the project, known as *Kāhea Loko*, which means “call of the fishpond”—a metaphor he takes to heart. “Fishponds not only symbolize a unique feat of ancient Hawaiian engineering, they are a place to learn about components of marine science such as the chain of life that exists at the microscopic level in a ecosystem,” says Lee.

The sanctuary’s Hawaiian Cultural Educator Joylynn Oliveira encouraged Lee to bring *Kāhea Loko* to *Kō’ie’ie Loko I’a*—one of the few relatively intact ancient fishponds on the Maui coastline. Lee took up Oliveira’s invitation to visit the sanctuary and was impressed with what he found.

Of the six different types of fishponds around Hawaiian shores, Lee says the one at the sanctuary is a *loko kuapā*; it was designed to create a brackish mixture of ocean and fresh water. He notes: “Native Hawaiians had a real taste for fish from this type of environment, so they built the fishpond walls with sluice gates. The juvenile fish would come inside to feed but, as they grew, they couldn’t get out. This also protected the stock from outside predators.” Lee wants youngsters to take pride in this old-time ingenuity of their ancestors. “By learning about fishponds, they will not only discover the past, they will go forward and build something for the future,” he says. Y

SANCTUARY DATEBOOK

Sanctuary Lecture Series
Tuesday, June 11, 7:00 p.m.
Sanctuary headquarters on Maui
726 South Kīhei Road in Kīhei
SAVING MAUI’S BEACHES
Dr. John Rooney, University of Hawai’i Coastal Geology Group, looks at the causes and cures for erosion problems affecting Maui’s shores. Contact: **879-2818**

Sanctuary Advisory Council Meeting
Thursday, June 13, 10 a.m.
Honolulu Airport Conference Room
Agenda includes presentation by John Reghi of NOAA Fisheries Enforcement. Contact: **397-2655**

Set Your Sights on Summer Coral Spawning!
Variable locations and dates
Many Hawaiian corals are found nowhere else in the world. Their reproductive activities are highly visual. Observe the magic of coral spawning as it unfolds in Hawaiian waters.
For information and summer dates, contact State Division of Aquatic Resources. Call **587-0318** and ask for a copy of *Reef Renewal: Hawai’i’s Unique Coral Spawning Events*